

DOCKET FILE COPY ORIGINAL

BELLSOUTH

Kathleen B. Levitz
Vice President-Federal Regulatory

January 28, 1998

EX PARTE ON LATE FILED

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1133-21st Street, N.W.
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Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
1919 M Street, NW, Room 222
Washington, D.C. 20554

RECEIVED

JAN 28 1998

**FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY**

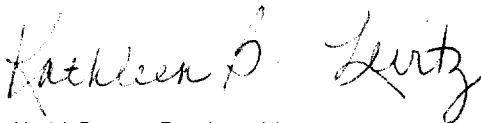
Re: Written Ex Parte in:
CC Docket No. 97-208 / CC Docket No. 97-231,
CC Docket No. 97-124, CC Docket No. 97-137,
And CC Docket No. 96-98

Dear Ms. Salas:

This is to inform you that BellSouth Corporation has responded today in a written ex parte to questions posed recently by staff in the Common Carrier Bureau. Jordan Goldstein and Michael Pryor of the Bureau's Policy and Program Planning Division posed some of the questions during a telephone call they placed to the undersigned on January 21, 1998. The remainder of the questions arose during a recent meeting of Common Carrier Bureau staff and representatives of BellSouth Corporation. That ex parte meeting, for which notice was filed with you on January 23, 1998, was in the above referenced proceedings.

Pursuant to Section 1.1206(a)(1) of the Commission's rules, we are filing in each of the proceedings listed above two copies of this notice and that written ex parte presentation. Please associate this notification with the above-referenced proceedings.

Sincerely,



Kathleen B. Levitz
Vice-President-Federal Regulatory

Attachment

cc: Carol Matthey

No. of Copies rec'd 0811
List ABCDE

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January 28, 1998

EX PARTE

Ms. Carol Matthey
Acting Chief
Policy and Program Planning Division
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

RE: Written Ex Parte in CC Docket No. 97-208/
CC Docket No. 97-231, CC Docket No. 97-124,
CC Docket No. 97-137 and CC Docket No. 96-98

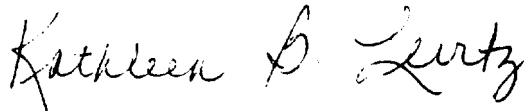
Dear Ms. Matthey:

On Wednesday January 21, 1998, Jordan Goldstein and Michael Pryor, attorneys in the Common Carrier Bureau's Policy and Program Planning Division called me to present a list of questions relating to BellSouth's compliance with checklist requirements of Section 271(c)(2)(B) of the Communications Act of 1934 as amended. Subsequently, on January 23, 1998, representatives of BellSouth met with you and your staff to discuss issues relating to the Section 271 checklist requirements. At that time your staff asked the BellSouth representatives for additional information on issues relating to: (1) BellSouth's provision of access to poles, ducts and conduits; and (2) BellSouth's provision of access to its E-911 database. They also requested information about: (3) procedures BellSouth used to notify CLECs of changes in BellSouth processes affecting CLEC operations; and (4) processes in place to enable a CLEC to review, prior to its publication in the BellSouth white pages directory, information concerning that CLEC's customers.

We have gathered the information that we believe is most responsive to your staff's requests. That information is attached. If after reviewing this attachment your staff concludes that it needs additional

In compliance with Section 1.1206(a)(1) of the Commission's rules, we have today filed with the Secretary of the Commission two copies of this written ex parte presentation in each of the proceedings listed above and requested that it be associated with each of those proceedings.

Sincerely,

A handwritten signature in black ink, reading "Kathleen B. Levitz". The signature is written in a cursive, flowing style.

Kathleen B. Levitz
Vice President-Federal Regulatory

Attachment

QUESTIONS RAISED 1/21/98
CONVERSATION BETWEEN KATHIE LEVITZ, JORDAN GOLDSTEIN AND MICHAEL
PRYOR

Bona Fide Request Process

- Q. Provide Information as to how BFR process works. How long does it take from start to end of negotiations and how often do negotiations end successfully? How often does the third party receive the service that the third party has requested?
- A. The Bona Fide Request (BFR) process is designed to track, evaluate and provide a response to customers' requests for non-tariffed products and/or services that are not covered in the customer's Interconnection Agreement or Wireless Contract.

The BFR is submitted in writing by the customer which specifies the required service or product. This document, from the customer, specifies the technical requirements and required service date of the product or service. Within ten days of receipt of the request, BellSouth acknowledges receipt in writing.

Within forty days of receipt of the BFR, BellSouth provides a preliminary analysis which advises whether development of the requested feature, function or capability under the BFR process is appropriate. If so, the analysis includes an estimate of BellSouth's prices for development of the product or provisioning of the service. This estimate includes a firm and fixed amount depicting the costs for the development of a project plan, design plan and estimating time and resources for the product or service.

An invoice is sent to the customer for the firm and fixed amount for the product or service and remittance to BellSouth is to be made within ten calendar days. Receipt from the customer of the firm and fixed amount for the product or service serves as authorization for BellSouth to proceed with the development. Within sixty days BellSouth will provide a final quote to the customer. The final quote will include installation intervals and a binding quote price, which includes a final price breakdown.

The customer will notify BellSouth of its acceptance within thirty calendar days after receiving the final BFR quote.

Successful BFRs

Following are successfully completed, customer initiated, bona fide requests:

Customer Name	BFR #	Date Requested	Date Completed	Service Requested
AT&T	97-003ATT	4/23/97	7/24/97	Request to use existing access trunk groups currently in place to carry local, intraLATA and interLATA traffic
AT&T	97-004ATT	5/6/97	9/3/97	Directory Assistance selective routing over a 900 number for completion to an AT&T DA work center.
AT&T	97-007ATT	6/16/97	10/27/97	0-,0+ 7 digit routing of traffic to AT&T OSPS platforms
AT&T	97-010TT	7/8/97	9/19/97	Joint testing of Local Operator Svcs. And DA routing.
TCCF	97-017TCCF	8/18/97	9/17/97	Passing of calling line number information related to ESSX or Multiserv to a dedicated T1 in the 1A, 5E and DMS switches

Trunk Blockage

- Q. What are the trunk blockage rates occurring in BellSouth's network behind the tandem?
- A. Service performance results from Exhibit WNS-11 and Exhibit WNS-12 provide a good assessment of the quality of the service provided on trunk groups carrying traffic to CLECs. Service performance results from the Exhibit WNS-13 provide

a good assessment of the quality of service provided on trunk groups carrying local service traffic for BellSouth retail customers.

Using the latest data from December 1997, and assuming that all of the trunk groups had the same busy hour in the same time period, the trunk blocking for CLECs is 1.4% (0.9% between the tandem and the CLEC switch, plus 0.5% between the tandem and a BellSouth end office). Compared to 4.0% for BellSouth (2.0% for each group to the tandem), the service quality provided to the CLECs is consistent with or higher in quality than the service levels BellSouth provides for its retail customers.

Summarizing the trunk service performance results from Exhibit WNS-11 (CLEC Trunk Group Service Report Summary), Exhibit WNS-12 (BellSouth CTTG Results Reported to FCC), and Exhibit WNS-13 (Local Network Trunk Group Service Report Summary), interconnection trunking provided to the CLECs is at least equal in quality to that BellSouth provided to itself or any other party, as measured by blockage.

- Q. What are the trunk blockage rates between the interconnection point and the CLEC switch?
- A. Most traffic from BellSouth's end user customers is delivered to a CLEC's switch via a BellSouth tandem switch (either the access tandem or local tandem) rather than directly from the BellSouth end office switch to the CLEC switch. As a result, the answer to the previous question provides the best view of trunking performance regarding BellSouth's delivery of traffic to CLEC switches.
- Q. How does BellSouth identify where the blockage is occurring? If it is on the BellSouth network, how does BellSouth identify precisely where?
- A. BellSouth collects traffic performance data on the trunk groups interconnected with the CLECs as well as all other trunk groups in the BellSouth network. The data are processed weekly through a mechanized system which calculates the percent blocking during the time-consistent busy hour (TCBH). The TCBH is defined as the identical hour each day during which, over a number of days, the highest average traffic is measured.

From this data, BellSouth has compiled an extensive set of measurements to confirm that calls through the BellSouth network to CLEC customers are carried on a non-discriminatory basis over trunking facilities that are subject to the same design and implementation as the trunking facilities used for traffic to BellSouth's retail end users.

BellSouth has provided detailed trunk group blocking information regarding

trunks used to carry traffic for CLECs as well as for BellSouth retail customers. Information provided includes percent blocking, size of trunk groups, and busy hour. From the data, one can determine the magnitude of the trunk blockage.

Q. If blockage does occur, does BellSouth have methods and procedures to remedy the problem?

A. Yes. In addition to routing trunk servicing practices described above, BellSouth continues to work with its CLEC customers on trunk forecast and planning meetings. BellSouth has participated in numerous meetings with the CLECs to gather trunking information as well as further improve the trunk forecasting and information process. Some CLECs provide trunk forecasts to BellSouth, but the forecasts are more on a just-in-time basis versus a forecast. For example, one CLEC provided BellSouth with a forecast on July 10, 1997, requesting approximately 10,000 trunks in one city, 6,600 to be ordered by BellSouth and 3,400 by the CLEC. The trunks were to be installed starting August 1, 1997 and continuing through December 1, 1997. This was too short a time frame for provisioning that many trunks. BellSouth does not have 10,000 terminations available for "instant" ordering or use. If a vendor has to add equipment, it could require up to 26 weeks to install a trunk. BellSouth has requested vendors shorten their intervals, and they have, where feasible; but this type of abrupt, unplanned demand increases the opportunity for blocking. In another example from a different state, a CLEC in November 1997 requested that BellSouth order in :

In City A: 2016 trunks in December 1997, follow by another 2016 trunks a month later in January 1998.

In City B: 4032 trunks in December 1997, follow by another 2016 trunks in January 1998.

In City C: 2016 trunks in December 1997, follow by another 2016 trunks in January 1988.

BellSouth does not have that kind of spare terminations and facilities, nor is the timeframe for the large quantities reasonable. It is very difficult to order equipment and have them in place to terminate 6048 trunks in two months. Furthermore, some CLECs do not provide a forecast of their anticipated needs at all. Rather, BellSouth receives the request for additional trunks after the CLEC has committed to the end user. In these instances, trunk group blocking is highly probable. BellSouth had a recent experience like this where the blocking was in excess of 60% due to the unexpected CLEC volume. Although technically the calls were blocked in the BellSouth network, more pre-planning by the CLEC would have alleviated much, if not all, of the blockage.

Q. What is the size of the trunk groups experiencing blocking?

- A. BellSouth has some trunk groups in the network that are associated with the CLEC trunk options. These are the CTTGs (Common Transport Trunk Groups) which interconnect the BellSouth end office with the access tandem. Although these trunk groups primarily handle interLATA and intraLATA toll traffic, most of the CTTGs have also begun handling local traffic as CLECs interconnected with BellSouth at the access tandem.

The CLEC local service trunk group interconnection measurement contains the service performance results of final trunk groups between the CLEC switch and a BellSouth tandem or end office. It is subdivided into two components: one for trunk groups ordered and administered by BellSouth, and the other for trunk groups ordered and administered by CLECs. Exhibit WNS-11 contains a summary of the monthly results from June 1997, to December 1997.

Exhibit WNS-11A contains details on the four trunk groups ordered and administered by BellSouth (Reference: 3rd line of "BellSouth ordered" chart). All four groups incurred blocking due to one or more of the following reasons:
The CLECs not advising BellSouth in sufficient time to add trunks to the network
The CLECs not ready to add the trunks as ordered by BellSouth
The CLECs requiring a very long lead time of several weeks before being able to turn up trunks.

For the four trunk groups referenced above, the trunks being added were in the hundreds per trunk group. This type of growth is very unusual in the existing BellSouth network; nevertheless, as in this instance, BellSouth strives to add the trunks as quickly as possible. In some locations, trunks cannot be added due to shortage of facilities and/or equipment. Thus, it is vital that the CLECs provide BellSouth with their plans on network expansion. BellSouth will continue to work with the CLECs on this endeavor.

- Q. What percentage of blocked calls are rerouted in our network?

- A. BellSouth's trunking network relies heavily on the concept of alternate routing of traffic first to "high usage" trunk groups (often directly between the originating and terminating switches) and "final" trunk groups (between the originating switch and the tandem switch and between the tandem switch and the terminating switch.) Use of this trunking network architecture requires a high level of knowledge about offered and carried load volumes, both by day of the week and time of day. Trunk forecasts, developed over time using actual measured volumes, contribute significantly to the effective use of this trunking network architecture. Where sufficient information regarding traffic patterns and volumes is available, the principles of economic engineering are applied, based on factors such as distance and quantity of trunks required to determine the

intended level of overflow from the high usage trunk group to the final trunk group. Note that, from the end user customer's perspective, a call is not blocked simply because the call was rerouted from the high usage trunk group to the final group. This is because the call may still complete via the tandem switch. Because of the use of this trunking architecture in BellSouth's trunking network, a fairly highly level of calls that are ultimately blocked will have been rerouted from the high usage trunk group to the final trunk group.

Q. What are the average installation intervals for new or additional trunks?

A. The normal interval for new or additional trunks is twenty-two days. However, this interval is agreed to between BellSouth and the other carrier and can be as short as one day in an emergency situation or as long as six months if either BellSouth or the other carrier must add switching equipment on the facilities. The percentage of committed dates BellSouth has met on trunk groups in the past is reflected in the response to the following question.

Q. Are there backlogs in provisioning trunks?

A. Following is the latest historical data (December 1997) related to pending service orders for Interconnect Trunks:

	<u>Total</u>	<u># Met</u>	<u>% Met</u>	<u># Not Met</u>	<u>% Not</u>
<u>Met</u>					
BLS Trunk Orders	20,480	17,692	86.4	2,788	13.6
CLEC Trunk Orders	5,671	5,380	94.9	291	5.1

Note: If we have data organized in different fashion or propose different measurements than requested above, FCC is open to discussion.

LOOPS

- Q. Provide data regarding disruption attributable to difference in time at which cut-over occurs and time at which number porting occurs.
- A. The data requested does not exist. However, BellSouth performed a study during 1997 to determine BellSouth's performance for a CLEC in Georgia. That study is discussed in the following paragraph.

BellSouth performed a study of its performance regarding cutover activity for unbundled loops for a CLEC in Georgia in 1997. From late in 1996 to June 20, 1997, BellSouth provisioned 325 loops to this CLEC in Georgia. Of these, 318 loops were cutover within 15 minutes (98%). Note, however, that this the time a customer may have been out of service due to the cutover of the loop rather than the time it took to implement Service Provider Number Portability (SPNP) for that customer. During the time between the customer's loop being cutover to the CLEC switch and the completion of activity to effect number porting, the customer has dialtone and can place and receive calls (at least on the telephone number working the CLEC's switch). BellSouth does not (and cannot) commit in the interconnection agreements to implementing SPNP within a specified period of time nor does BellSouth have data regarding the disruption time attributable to the difference between when the loop cut-over occurs and the time at which number porting occurs.

- Q. Provide data regarding disruption because cut-over takes too long.
- A. Insufficient data exists to quantify cut-over disruptions, either between moves of service from BellSouth to a CLEC or moves of service from a CLEC to BellSouth (that is, a so called "win-back".)
- Q. How does BellSouth determine when a cut-over commitment has been met?
- A. BellSouth's internal results for Due Date Met consider any order worked on due date to have met the due date requirements regardless of the time of the day. However, due to contractual commitments to certain CLECs, BellSouth is developing measurements that will track whether or not the Due Time was met. At present this is a manual process.
- Q. What measurements is BellSouth using to show that cut-over commitments are met? [e.g. average completion intervals for unbundled loops; for unbundled loops with number portability; and for win-backs; average outage intervals for loop cut-overs with number portability]
- A. "Percent Appointments Met" data is collected and provided by BellSouth as ordered by the Georgia Public Service Commission. BellSouth believes that

Percent Appointments Met data accurately depicts BellSouth's performance in meeting its cutover commitments to CLECs for unbundled loops.

- Q. What procedures does BellSouth use for notifying CLECs when outages occur because of human error or accidents?
- A. As used here, the term "outage" does not include trunk blockages which occur as the result of inaccurate traffic load forecasting or insufficient trunk quantities being installed. Instead, the term "outage" is used here to describe an out of service condition caused either by (1) an equipment breakage or malfunction; or (2) an inadvertent human error which caused working equipment to be taken out of service. At present, the normal procedure is that when an outage occurs, the CLEC is notified once a trouble ticket is received by BellSouth. If, however, a CLEC has an interconnection agreement with BellSouth that includes a "center to center interface" agreement (a.k.a. operational understanding agreement), the procedure is that BellSouth's Network Management Center (NMC) will interface with the CLEC's NMC and alert them to the blockage. This assumes that the CLEC has a corresponding NMC type organization. Thus,
- Q. If there is no trouble report from a CLEC alerting BellSouth to the outage, is there some way the CLEC is informed when some of its customers' lines are out of service?
- A. No, unless there is an existing operational understanding agreement.

SWITCHING

- Q. The CCB notes that CLECs that purchase unbundled switching from BellSouth do not receive reciprocal compensation. Is this BellSouth's position as a matter of law or is it not technically feasible for BellSouth to determine the amount of compensation?
- A. It is BellSouth's position that CLECs that purchase unbundled switching from BellSouth do not receive reciprocal compensation. This is not a technical issue or a matter of law.
- Q. Is BellSouth currently providing information in Daily Usage Files (DUFS) electronically to CLECs?
- A. BellSouth is currently providing OLEC (Other Local Exchange Carrier) Daily Usage File or ODUF information electronically to CLECs. BellSouth has developed the capability to provide Access Daily Usage Files (ADUFs). The provision of this data is pending finalization of negotiations with CLECs.

- Q. Provide a sample ODUF to show electronic provision.
- A. Attached is a sample ODUF record in industry standard format.
- Q. Have any CLECs used the BFR process to request any vertical features not currently offered by BellSouth?
- A. No. One CLEC claims that BellSouth refused to process the CLEC's orders for 900 Number Blocking in Kentucky. The CLEC requested that BellSouth provide call blocking of 900 calls as a "stand alone" feature. BellSouth offers to block calls to 900 numbers and 976 numbers upon request of BellSouth's retail customers. BellSouth is not opposed to developing such a "stand alone" capability for blocking of only calls to 900 numbers, although work remains to be completed to determine a technical solution. On November 3, 1997, BellSouth offered the CLEC an alternative way of providing the service it requested.

One CLEC claims that BellSouth refused to process that CLEC's orders for Call Hold in Kentucky. Here again, the CLEC requested that BellSouth provide Call Hold as a "stand alone" feature independent of the User Transfer feature. Call Hold is a standard feature and is included with other features rather than being available as a "stand alone" feature. Unlike the issue of combining blocking of calls to 900 numbers and 976 numbers into a single feature, BellSouth believes that feature interactions between the Call Hold and User Transfer features must be examined in order to determine the technical feasibility of such a "stand alone" feature for Call Hold. It is important to note that feature interaction is a function of the switch software provided by the manufacturer. On November 3, 1997, BellSouth responded to the CLEC's request by stating that the CLEC could issue a Bona Fide Request for such a "stand alone" Call Hold feature capability.

- Q. How long did it take to negotiate and what was the outcome?
- A. To date, no CLEC has made such a Bona Fide Request for either of the two features discussed above.

NUMBER PORTABILITY

- Q. Have any CLECs used the BFR process to request Route Index-Portability Hub (RIPH) and/or Directory Number Route Indexing (DNRI) from BellSouth?
- A. No. BellSouth confirmed the technical feasibility for both RIPH and DNRI. Both RIPH and DNRI can be implemented upon request by a CLEC. BellSouth

believes that CLECs who elect to use the Statement of Generally Available Terms and Conditions (SGAT) rather than negotiating individual interconnection agreements will not normally have a desire for RIPH or DNRI. However, if a CLEC requests RIPH or DNRI, BellSouth will provide it.

- Q. How long did it take to negotiate and what was the outcome?
- A. To date, only one CLEC has requested RIPH and that request was negotiated as part of that CLEC's Interconnection Agreements, rather than through the BFR process. To date, no CLEC has requested DNRI, either through negotiations as part of an Interconnection Agreement or through the BFR process.
- Q. Provide a copy of the latest monthly report to NANC.
- A. Copies of the October-December, 1997 reports were provided in BellSouth's *ex parte* filed with the Commission on January 21, 1998.

RECORD DESCRIPTION

<u>42</u>	<u>50</u>	<u>01</u>
Category	Group	Record Type

Category 42: CUSTOMER CHARGE

Group 50: SUMMARY

Res. Type 01: NON DETAIL CHARGE

Use of Record:

This record is used to bill a non detail charge to a customer. The charge is not necessarily associated with a specific billable service.

<u>Headers/Tailers:</u>	<u>CMS</u>	<u>Local</u>
20-20-01/02	N	Y
20-21-01/02	N	Y
20-22-01/02	Y	Y
20-22-03/04	Y	Y

Special Considerations:

- The following fields are not applicable to this record:
 - From Number
 - To Number
 - Connect Time
 - Billed Time
 - Rate Period
 - Rate Class
 - Message Type
 - From Location
 - Library Code
- The LATA Identifier (Indicator 16) is optional for this record, therefore, a value of "0" may be used.
- The "Type of Service" Indicator is in position 68.
- The "Type of Regulation Indicator" is in position 69.
- The "Charge Phrase 2" is in positions 123-134.
- The "Charge Phrase" is in positions 135-146.
- The "Miscellaneous Text Code" is in positions 168-172.
- Category 42 records are included in the same packs as Billable Messages.

**MISCELLANEOUS CHARGE
LINE SUMMARY
NON DETAIL CHARGE**

BR 010-300-010
Issue 18, May 1987

42

50

01

Field Description				Stat
1	Category	Record Identification		
2	Group			X
3	Record Type			
4	Year	Date Of Record		
5	Month			
6	Day			
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Field Description				Stat
1	Type of Record			
2	Type of Regulation Int.			
3	Return Code			X
4	From RAD			
5	Legal Company			
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RECORD DESCRIPTION

10
Category

01
Group

31
Record Type

Category 10: UNRATED MESSAGE

Group 01: NORTH AMERICAN ORIGINATED, TERMINATED AND BILLABLE

Rec. Type 31: LOCAL OR MESSAGE UNIT CHARGE

Use of Record:

This record is used to transmit recorded detail associated with with a local message * as identified in a local tariff.

Headers/Trailers:

CMDR

Local

20-20-01/02

Y

Y

20-21-01/02

N

Y

20-22-01/02

Y

Y

20-22-03/04

Y

Y

Special Considerations:

- Category 10 records are included in the same packs as billable records.

UNRATED MESSAGE
NORTH AMERICAN ORIGINATED, TERMINATED AND BILLABLE
LOCAL OR MESSAGE UNIT CHARGE

10

01

31

Field Description					Char.	
1	Category		Record Identification	X		
2	Group					
3	Record Type					
4	Year		Date Of Record	9		
5	Month					
6	Day					
7	From Number Length				9	
8	NPA	From Number	From Base Station Number	9		
9	NXX					
10	Line Number					
11	Number Of Message Units				9	
12	To Number Length				9	
13	NPA	To Number	To Base Station Number	9		
14	NXX					
15	Line Number					
16	0	Amount Collected			9	
17	1					
18	2					
19	3					
20	[REDACTED]					9
21	[REDACTED]					9
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49	[REDACTED]					9
50	[REDACTED]					9
51	[REDACTED]					9
52	[REDACTED]					9
53	[REDACTED]					9
54	[REDACTED]					9
55	[REDACTED]					9
56	[REDACTED]					9
57	[REDACTED]					9
58	[REDACTED]					9
59	[REDACTED]					9
60	[REDACTED]					9
61	[REDACTED]					9
62	[REDACTED]					9
63	[REDACTED]					9
64	[REDACTED]					9
65	[REDACTED]					9
66	[REDACTED]					9
67	[REDACTED]					9
68	[REDACTED]					9
69	[REDACTED]					9
70	[REDACTED]					9
71	[REDACTED]					9
72	[REDACTED]					9
73	[REDACTED]					9
74	[REDACTED]					9
75	[REDACTED]					9
76	[REDACTED]					9
77	[REDACTED]					9
78	[REDACTED]					9
79	[REDACTED]					9
80	[REDACTED]					9
81	[REDACTED]					9
82	[REDACTED]					9
83	[REDACTED]					9
84	[REDACTED]					9
85	[REDACTED]					9
86	[REDACTED]					9
87	[REDACTED]					9
88	[REDACTED]					9
89	[REDACTED]					9
90	[REDACTED]					9
91	[REDACTED]					9
92	[REDACTED]					9
93	[REDACTED]					9
94	[REDACTED]					9
95	[REDACTED]					9
96	[REDACTED]					9
97	[REDACTED]					9
98	[REDACTED]					9
99	[REDACTED]					9
100	[REDACTED]					9

Field Description					Char.
001	Method Of Recording				9
002	Return Code				X
003	From RAO				9
004	Message Billing Index				9
005	Local Zone				9
006	Rate Class				9
007	Time Class				9
008	Message Type				9
009	Time, DATE, and				9
010	Indicators				9
011					
012					
013					
014					
015					
016					
017					
018					
019					
020					
021	Operator Unit	Serial Number	Origination ID	9	
022	Recording Point Identification (ARPA)				
023	Billing RAO				9
024	Billing Number North American Standard		Billing Number Non Standard		X
025	Match Area, From Place	Match Area, From Place	Match Area, From Place	X	
026	Match Area, From Place	Match Area, From Place	Match Area, From Place		
027	Match Area, From Place	Match Area, From Place	Match Area, From Place		
028	Match Area, From Place	Match Area, From Place	Match Area, From Place		

Field Description				Char.
37	Library Code			X
38	Center Identification			9
39	Center Identification Extended			9
40	Reserved			9
41	Indicators			9
42	Reserved			9
43	Billing RAO			9
44	Reserved			9

Field Characteristics
9 = Numeric
X = Alphabetic

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THE

五、**附註事項**

[REDACTED]

11

一、二、三、四、五、六、七、八、九、十、十一、十二、十三、十四、十五、十六、十七、十八、十九、二十、二十一、二十二、二十三、二十四、二十五、二十六、二十七、二十八、二十九、三十、三十一、三十二、三十三、三十四、三十五、三十六、三十七、三十八、三十九、四十、四十一、四十二、四十三、四十四、四十五、四十六、四十七、四十八、四十九、五十、五十一、五十二、五十三、五十四、五十五、五十六、五十七、五十八、五十九、六十、六十一、六十二、六十三、六十四、六十五、六十六、六十七、六十八、六十九、七十、七十一、七十二、七十三、七十四、七十五、七十六、七十七、七十八、七十九、八十、八十一、八十二、八十三、八十四、八十五、八十六、八十七、八十八、八十九、九十、九十一、九十二、九十三、九十四、九十五、九十六、九十七、九十八、九十九、一百。

THE UNIVERSITY OF CHICAGO

SECRET

11

一、二、三、四、五、六、七、八、九、十、十一、十二、十三、十四、十五、十六、十七、十八、十九、二十、二十一、二十二、二十三、二十四、二十五、二十六、二十七、二十八、二十九、三十、三十一、三十二、三十三、三十四、三十五、三十六、三十七、三十八、三十九、四十、四十一、四十二、四十三、四十四、四十五、四十六、四十七、四十八、四十九、五十、五十一、五十二、五十三、五十四、五十五、五十六、五十七、五十八、五十九、六十、六十一、六十二、六十三、六十四、六十五、六十六、六十七、六十八、六十九、七十、七十一、七十二、七十三、七十四、七十五、七十六、七十七、七十八、七十九、八十、八十一、八十二、八十三、八十四、八十五、八十六、八十七、八十八、八十九、九十、九十一、九十二、九十三、九十四、九十五、九十六、九十七、九十八、九十九、一百。

BST/CLEC Trunk Interconnection/Blockage Measurements**1. Pre-CLEC Trunking Architecture**

In the pre-CLEC trunking architecture, BST had a two-tier trunk network. One tier was for interLATA and intraLATA toll traffic. The other tier was for local service traffic. The two tiers did not interconnect with each other. There was one set of trunk groups interconnecting the end offices, access tandems, and other network nodes, such as IXC (Interexchange Carrier) POP (Point-of-Presence) that is used for interLATA/intraLATA toll traffic. And, there was another set of trunk groups interconnecting the end offices and local tandems that is used for local traffic. An interLATA or an intraLATA toll call could not use a trunk group in the local service tier, nor could a local service call use a trunk group in the interLATA/intraLATA toll tier. This is true even in locations where the access tandem used for the interLATA/intraLATA toll network is the same one used for the local tandem network. The trunking between the two tiers were still kept separate.

There are two types of trunk groups: high-usage and final. A high-usage trunk group is usually between two end offices and is sized to overflow its excess traffic to a final trunk group interconnected with a tandem. A final trunk group does not overflow its excess traffic load to another trunk group. Instead, it provides a "All Circuits are Busy" announcement for the excess calls. A final trunk group should have a DBO (Design Blocking Objective) which is an expression of the probability of blocking for calls offered it. The exception to this is a trunk group used to connect operator answering positions with a switch. Although the latter is a final trunk group, it is sized according to the number of positions and not probability of blocking.

All of the final trunk groups in BellSouth use a DBO of 1.0% (10 calls out of 1000) during the TCBH (Time-Consistent Busy Hour) of the trunk group. The only exception to this is on trunk groups carrying first-route interLATA calls through an access tandem. The DBO for these trunk groups is 0.5% (5 calls out of 1000) blocking during for the TCBH of the trunk group. Thus, a final trunk group carrying first-route interLATA traffic between the access tandem and an end office or IXC POP has a DBO of 0.5%. All other final trunk groups (between end office and local tandem, or end office to end office) have a DBO of 1.0%.

The TCBH is defined as the identical hour each day during which, over a number of days, the highest average traffic is measured.

The reason why trunk groups carrying first-routed interLATA traffic have a lower blocking objective is to meet our equal access obligations as outlined at the time of the AT&T Divestiture. Equal access included the following:

- a. Equality in number of digits dialed by the end user.
- b. Equality in Probability of Blocking for traffic between the BST end office and an IXC.
- c. Equality in transmission quality.

At Divestiture, the AT&T trunk groups had a DBO of 1%. In most locations, the toll switch went to AT&T. BST had to establish access tandems to concentrate and distribute traffic since it was not economically justifiable for every IXC to establish a trunk group to every end office in the LATA. Thus, blocking equality was defined as 1% blocking for first-route between the end office and an IXC POP. With the interjection of the access tandem, 0.5% became the DBO for the trunk group between the end office and the access tandem, and also for the trunk group between the access tandem and the IXC POP. The two halves of one percent added back up to 1% blocking between the end office and IXC POP.

2. Post-CLEC Trunking Architecture

In the interest of establishing service with the CLECs as quickly as feasible, BST made a decision to interconnect with the CLECs at the interLATA/intraLATA tier of the trunk network rather than the local tier even though almost all of the calls are local. The interLATA/intraLATA tier was initially chosen for the following reasons:

- a. Much of the information that a CLEC needs for interconnection are the similar to the ones for used by the interexchange carrier industry. This information was put into mechanized databases since Divestiture in order to facilitate interconnection between BST and the interexchange carriers. For example, vital data elements associated with the proper routing of a call on a trunk group are available for the interLATA/intraLATA toll tier of the network, but not for the local service tier. This routing information is in a mechanized system supported by Bellcore Traffic Routing Administration organization. One standard output product is the LERG (Local Exchange Routing Guide) which is used by the IXCs to determine where to route the NPA-NXXs for the calls they hand-off to BST. Bellcore had to enhance their software capabilities in order for BST to load some data elements on the local service tier of the network into the LERG.

- b. **Better ability to properly record the call for billing purposes. The access tandems and end offices associated with the interLATA/intraLATA tier of the network were equipped to properly make a record of the calls for billing purposes. Similar capabilities were not provided for the local service tier. Proper recording reduces both the number of artificial factors that must be developed, and billing disputes that must be resolved.**
- c. **Better ability to provide 64CCC (Clear Channel Capability), which is required to process ISDN calls. Almost all of the tandems in the interLATA/intraLATA tier of the network are newer and of the digital type which can provide 64CCC. Many of the local tandems are older and of the analog type, which cannot provide 64CCC.**
- d. **Better trunking blocking objectives in most instances since the traffic is generally routed on the interLATA/intraLATA tier of the network in BST. As previously indicated, the DBO is 0.5% instead of 1.0% for the local service tier.**

The basic trunk network interconnecting BST with a CLEC consists of the following trunk groups:

- a. **A one-way trunk group from a BST end office switch or access tandem to the CLEC end office switch. This trunk group is for local & intraLATA toll traffic from BST end users to CLEC end users. From the inception of local service interconnection with CLECs, BST has allowed a trunk group to be directly connected between a BST end office and a CLEC end office switch. Usually the direct end office trunk is a high-usage trunk group overflowing to a final group interconnected with the tandem.**

BST is primarily responsible for sizing this trunk group which it orders from a CLEC. It is also responsible for the transport facilities to get the calls to the CLEC. The CLEC charges BST a MOU (Minutes of Use) fee for the traffic terminating to it on this trunk group.

- b. **A one-way trunk group from a CLEC end office switch to a BST end office switch or access tandem. This trunk group is for local & intraLATA toll traffic from CLEC end users to BST end users. From the inception of local service interconnection with the CLECs, BST has allowed a trunk group to be directly connected between a CLEC end office switch and a BST end office switch. Usually the direct end office trunk is a high-usage trunk group overflowing to a final group interconnected with the tandem.**

The CLEC is primarily responsible for sizing this trunk group which it orders from BST. It is also responsible for the transport facilities to get the calls to

BST. BST charges the CLEC a MOU fee for the traffic terminating to it on this trunk group.

- c. A two-way trunk group between a CLEC and office switch and the BST access tandem. This trunk group is for "transient" traffic between CLEC end users and non-BST end users in that local calling area.

The CLEC is primarily responsible for sizing this trunk group which it orders from BST. It is also responsible for the transport facilities to get the calls to or from BST. BST charges the CLEC a MOU fee for the traffic (originating or terminating to the CLEC) traversing this trunk group. The value added by BST on this trunk group is in switching the call with other carriers (Non-Bell, other CLECs, Interexchange Carriers, etc.) The two-way charge is primarily for the use of the access tandem in switching the call. The CLEC could interconnect directly with another party and thus bypass the tandem switching charge.

- d. There are other trunk groups interconnecting BST with the CLECs. These are primarily for E911, and other services requested by the CLEC, such as, operator services, directory assistance, intercept, etc.

BST has some trunk groups in the network that are associated with the trunk groups listed above, but are not ordered by CLEC. These are the CTTGs (Common Transport Trunk Groups) which interconnect the end office with the access tandem. Although these trunk groups primarily handle interLATA and intraLATA toll traffic, most of the CTTGs began handling local traffic as CLECs interconnected with BST at the access tandem. As previously mentioned, the DBO for the CTTGs is 0.5%.

Associated with the DBO is the MBT (Measured Blocking Threshold) which is the upper limit of blocking for a trunk group using that DBO. Since the trunking tables used in sizing final trunk groups are probability tables, there are statistical variances around the DBO. Measured blocking above the MBT is considered to be above the statistical tolerance limits of the algorithms used in trunk sizing. ***The MBTs were derived from Bell Laboratories studies and are included in Section 6.5.7 of the Tariff F.C.C. No. 1 - Access Service. These MBTs consider the size of the trunk group as well as the number of days of data in the average. The greater the number of trunks, and the greater the number of days of data in the average, the lower the MBT. With more data points in the average, one would get a more statistically accurate value for use in a probability table. Although higher MBTs, as much as 14%, are allowed, BST uses the two most stringent (lowest) ones for all trunk groups.*** Listed below are the two DBOs used in BST and their associated ***lowest*** MBTs:

Design Blocking Objective	Measured Blocking Threshold
1.0%	3.0%
0.5%	2.0%

Thus, any measured blocking of 3% or less in the time-consistent busy hour is considered to be within the tolerance limits for a trunk group with a DBO of 1%.

The following DBOs are used for the trunk groups listed in above.

- a. One-way trunk group from a BST end office switch or access tandem to the CLEC end office switch: 1.0%.
- b. One-way trunk group from a CLEC end office switch to a BST end office switch or access tandem: 1.0%.
- c. Two-way trunk group between a CLEC end office switch and the BST access tandem: 0.5%, since it carries first-route interLATA traffic through an access tandem.

Generally, the company with trunk sizing responsibility determines the DBO.

Since the first CLEC interconnection almost two years ago, the BST network architecture has evolved to where the CLEC can choose one or more of the following options in addition to the original ones listed previously:

- a. The one-way trunk groups can now be ordered as a two-way trunk group. The other two-way trunk group remains a separate two-way trunk group. The other trunk groups remain as is.
- b. All three trunk groups can now be ordered as a single two-way trunk group. The other trunk groups remain as is.
- c. A CLEC can have trunk groups to only one access tandem instead of all of the access tandems in the LATA. A CLEC choosing this arrangement could decrease its call completion rate due to additional trunk groups involved in completing the call.
- d. A CLEC can have its trunk groups carrying local traffic interconnect at the local tandem. This is identical to the two-tier network used by BST for interLATA/intraLATA toll and local service as previously mentioned.

3. Trunk Service Performance Measurements

BST collects traffic measurements on the trunk groups interconnected with the CLECs as well as all other trunk groups in the network. The measurements are processed weekly through a mechanized system which calculates the percent blocking during the time-consistent busy hour.

On any one-way trunk group from the CLEC to BST, the blocking calculated by the mechanized system in BST will not be as accurate as for the ones that are two-way or one-way from BST to the CLEC. This is due to technical constraints since BST cannot mechanically collect Peg Count and Overflow measurements, which are required to more accurately determine blocking. Peg Count and Overflow measurements are collected only at the originating end of the trunk group, which, for BST, would be a two-way or a one-way trunk group from BST to the CLEC. On a one-way trunk group from the CLEC to BST, all BST can collect is usage, which the system then uses to determine a theoretical blocking. This latter blocking is called theoretic since it was not calculated from Peg Count & Overflow measurements. It was derived by using only usage measurements and going "backwards" through the trunk capacity algorithms to determine the level of blocking. Also, due to the distortions caused by using only usage measurements on very small size trunk groups of two trunks or less, these groups are not included in service performance results.

The following categories are used in evaluating trunk group service performance on final trunk groups. (There are no trunk group service performance results for high-usage trunk groups since a high-usage trunk group overflows its excess traffic load to a final.):

- a. **CLEC Local Service Trunk Group Interconnection** - This category contains the service performance results of final trunk groups between the CLEC switch and a BST tandem or end office. It is subdivided into two components, one for trunk groups ordered and administered by BST, and the other one for trunk groups ordered and administered by CLECs. Starting with the June 1997 service period, BST began compiling trunk group service performance results for this category.
- b. **BST Local Service Trunk Group** - This category contains the service performance results of final trunk groups in the BST local service tier of the network. It includes trunk groups between the end office and the local tandem as well as final trunk groups between end offices. These trunk groups carry local service traffic for the BST retail customers. Starting with the June 1997 service period, BST began compiling trunk group service performance results for this category.